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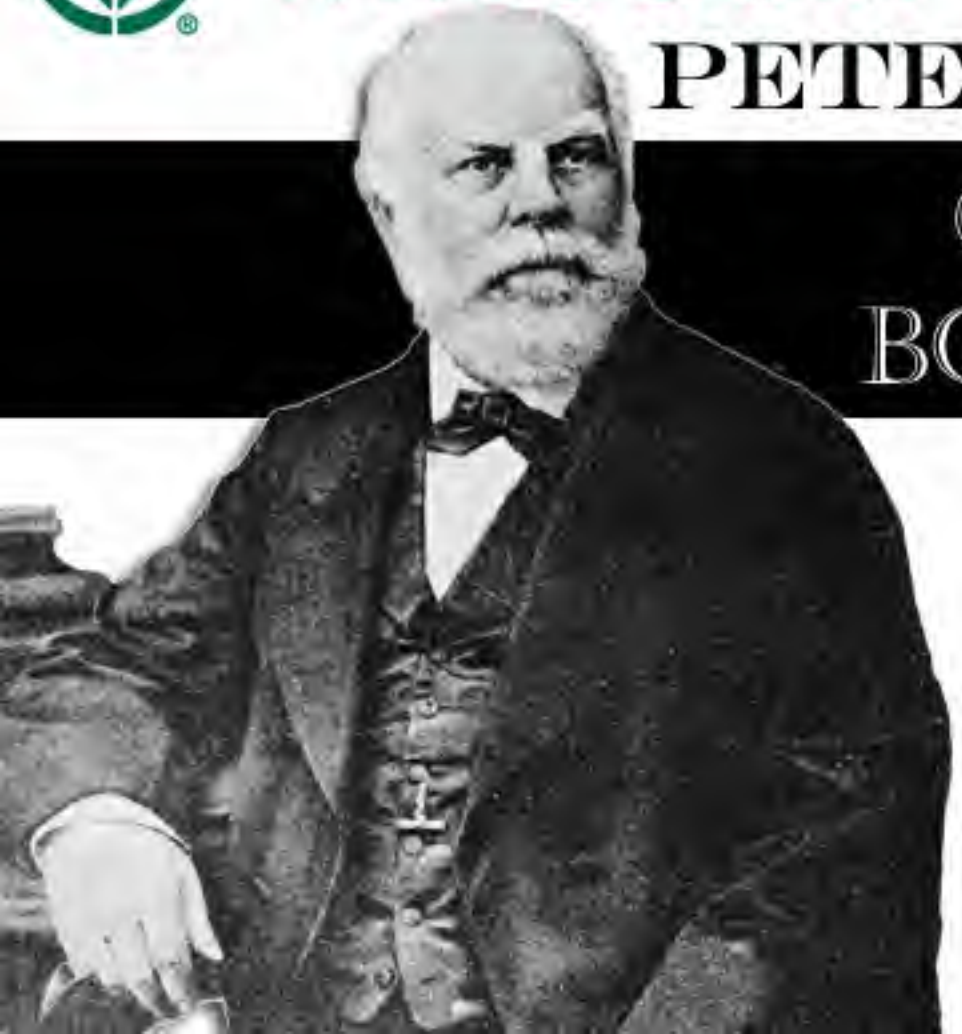


Pagination Note:
Since many of the items lack a specific page number, the page number displayed online refers to the sequentially created number each item was given upon cataloging the materials.

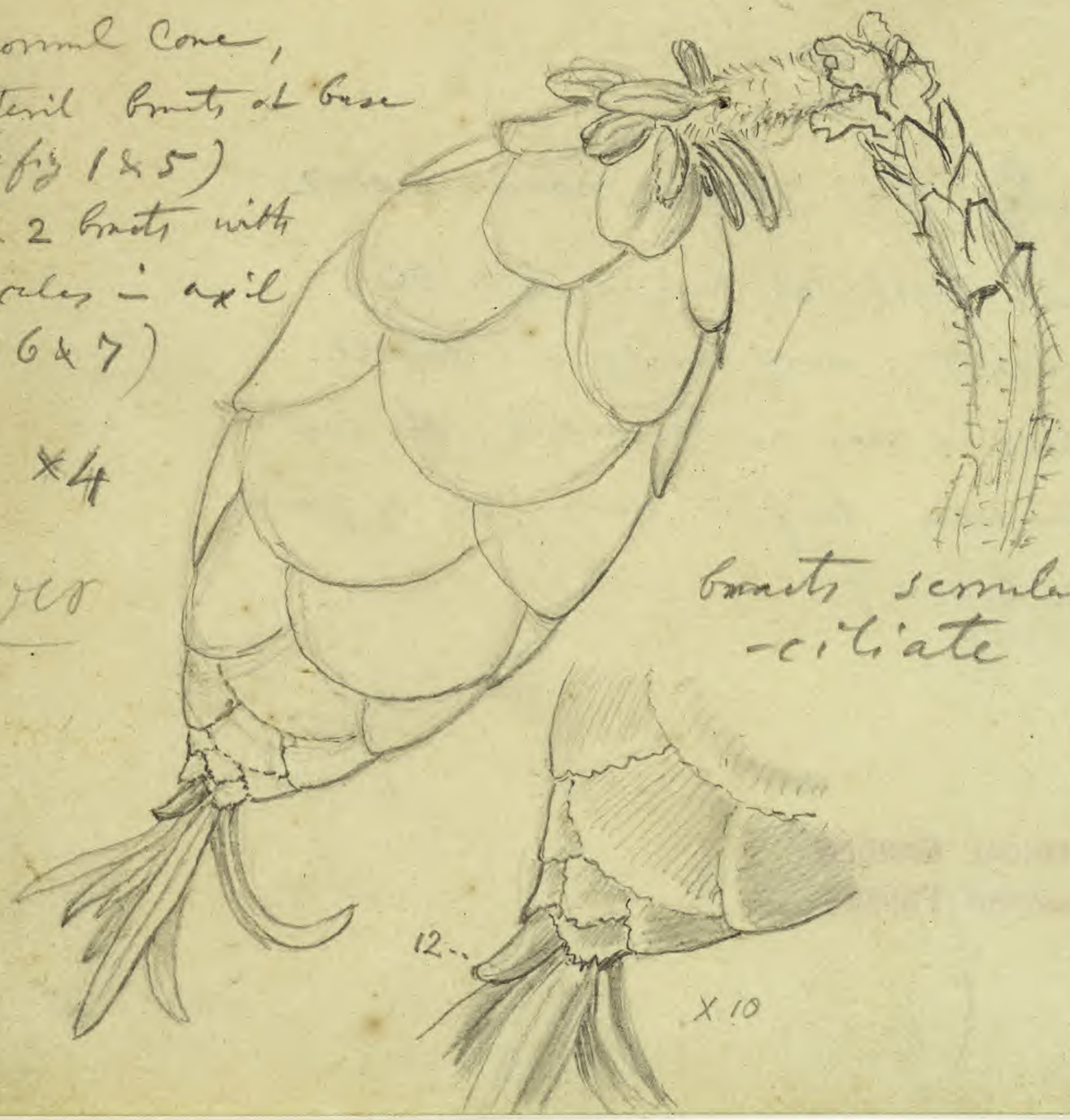
Tsuga Canadensis

Hot Dol Missouri July 19 1863

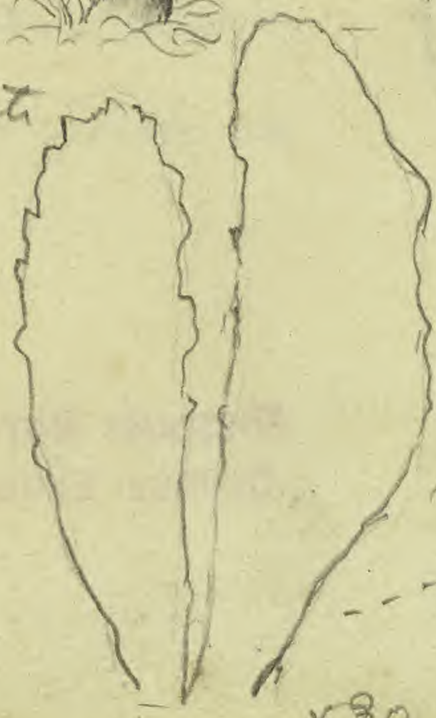
abnormal Cone,
5 steril bracts at base
(see fig 1 & 5)
next 2 bracts with
2 scales in axil
(fig 6 & 7)

×4

over



bracts serrulate
-ciliate



12..

X 10

×30

fuse X 10

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cm
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Ordinarily the cones have 1 or 2
or no sterile bracts at base, small
and adpressed; very rarely a small
notched scale is seen in the axil of one
I have not seen bifid ones, or a pair
as here - 6 and 7

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×10 8

Tsuga Canadensis H. B. Missouri July 19 1863

10 8

×10

10

Scale of fig 7 developed scale unripe seed

Scales with their axillary buds from lowest part of Cone figured on tab the 8th 9th 10th & 15th - order of succession - 9 an ordinary bract from the middle of the Cone

9 7

base of Cone

15 9

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Tsuga Canadensis H.D. Mission July 20th 1863

×10

the 1st 5es & 6es of the 6 uppermost bracts which bear scales in the axils 1–4 contain incomplete seeds 5 & 6 are sterile

7th – 11th or uppermost sterile bracts bearing no scales in axils, brown & membranaceous, last one already leaf-shaped

12 the first small green leaf of branch growing out of cone – ovate – the following ones are larger, more foliaceous & entire.

Upper end of cone

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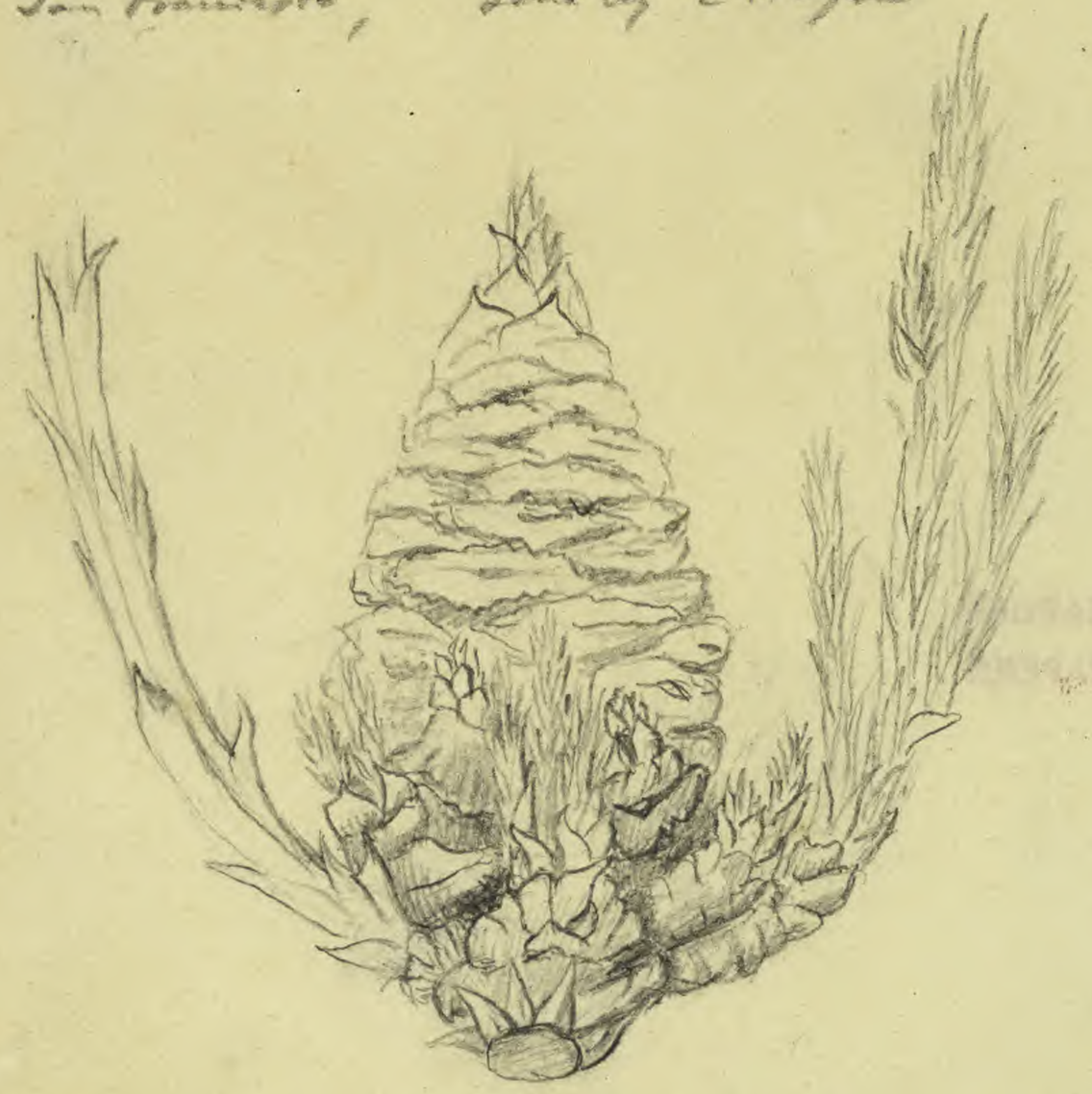
Sequoia gigantea

terminal proliferous cone of a young tree

San Francisco, sent by C Hilgard

Jan 15 1880



×4 hilum ?

pendulous

scale of one of the lowest cone scales, producing the stronger branch.

numerous seeds, all empty

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Sequoia gigantea

scales of a proliferous cone

Zobel 7 1950

×4

abortive seed free tip! (apparently erect)

× × pendulous rudiments of ovules

×

a

a

a separating line between Bract and scale

dark spots where seeds have left an impression or the attachment of seeds? so that they are erect (like the ovules)?

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Feb 7 1880

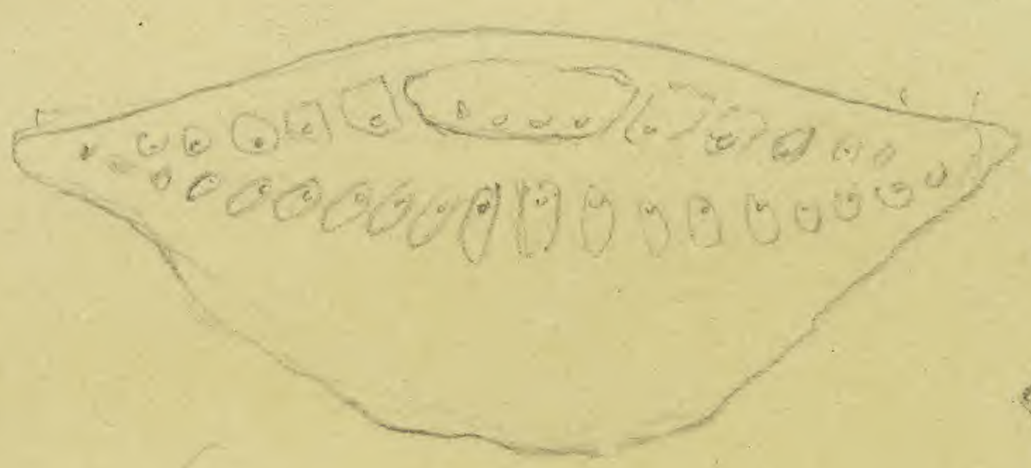
×4

5 Segment a gigantea
proliferous cone

upper

Sections through a proliferous cone

sect. 2.



sect. 4

upper

sect. 3

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Sequoia gigantea
Redwood cone

Rob 7 1x80

upper side

x4

sect 1.

sect 4

sect 3

sect 2

sect 1

corky

wood

x30

bast

wood bundles
white

(with ~~bast~~ wood with little ~~wood~~ bast)

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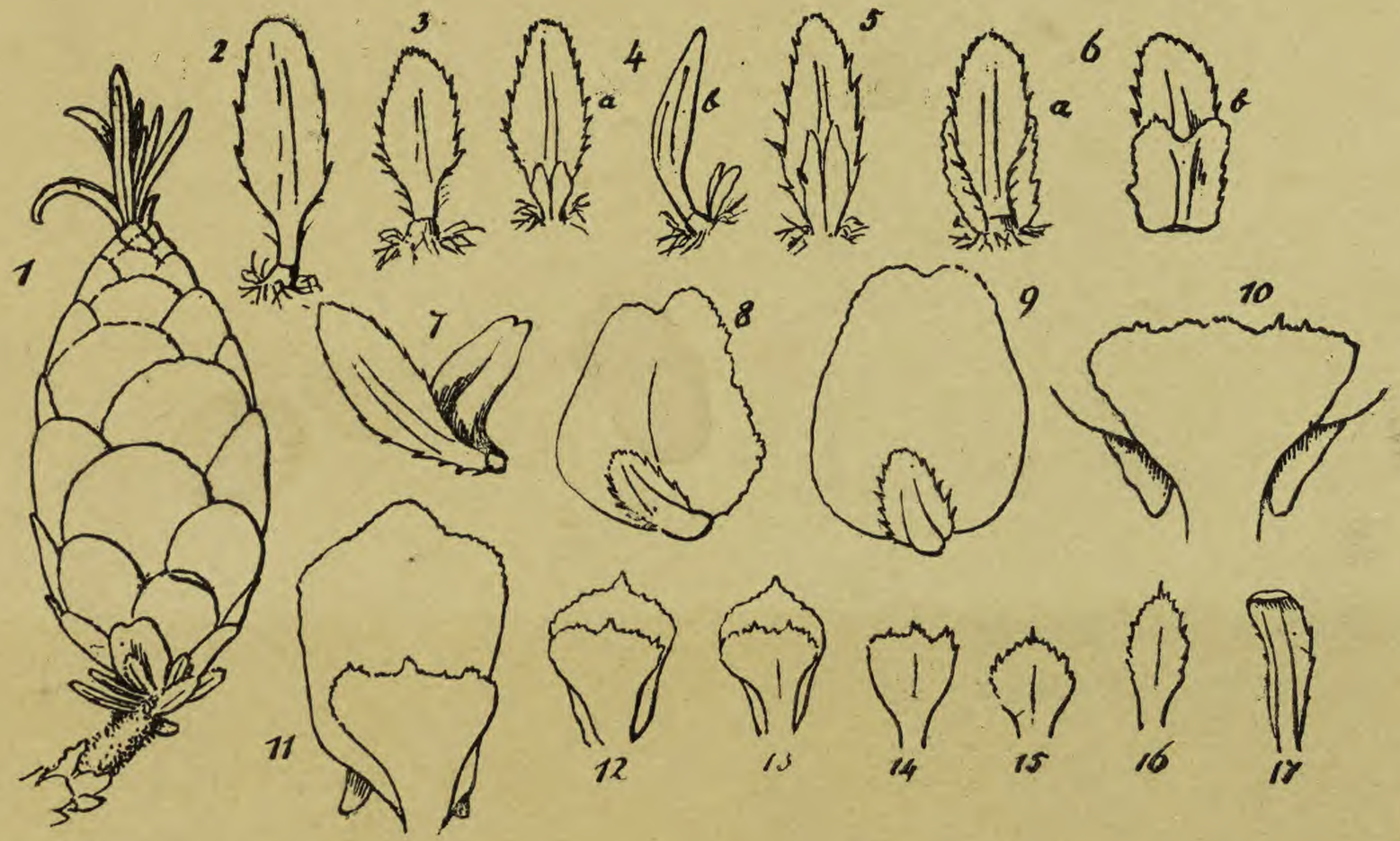

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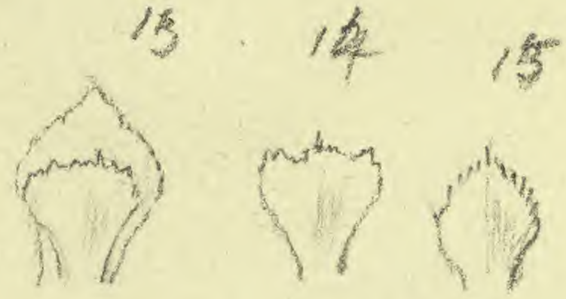

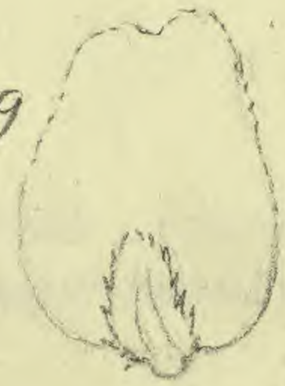

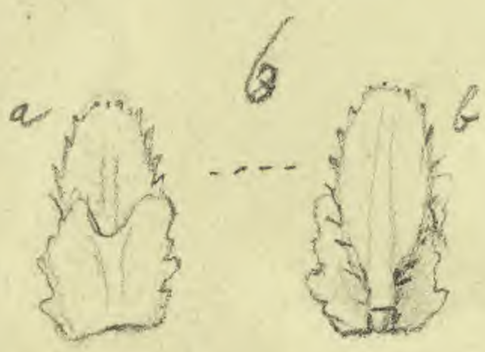

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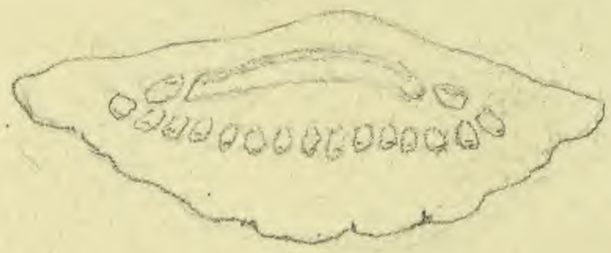
1.

2

3

The letters must be exactly at the same place in different rows

4



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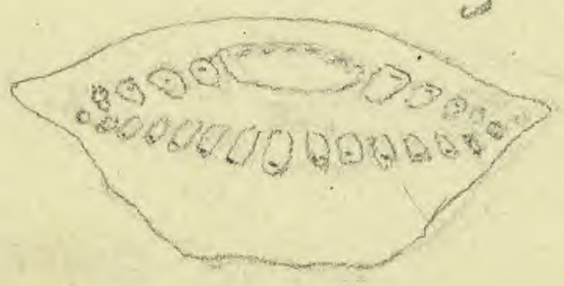

6

7

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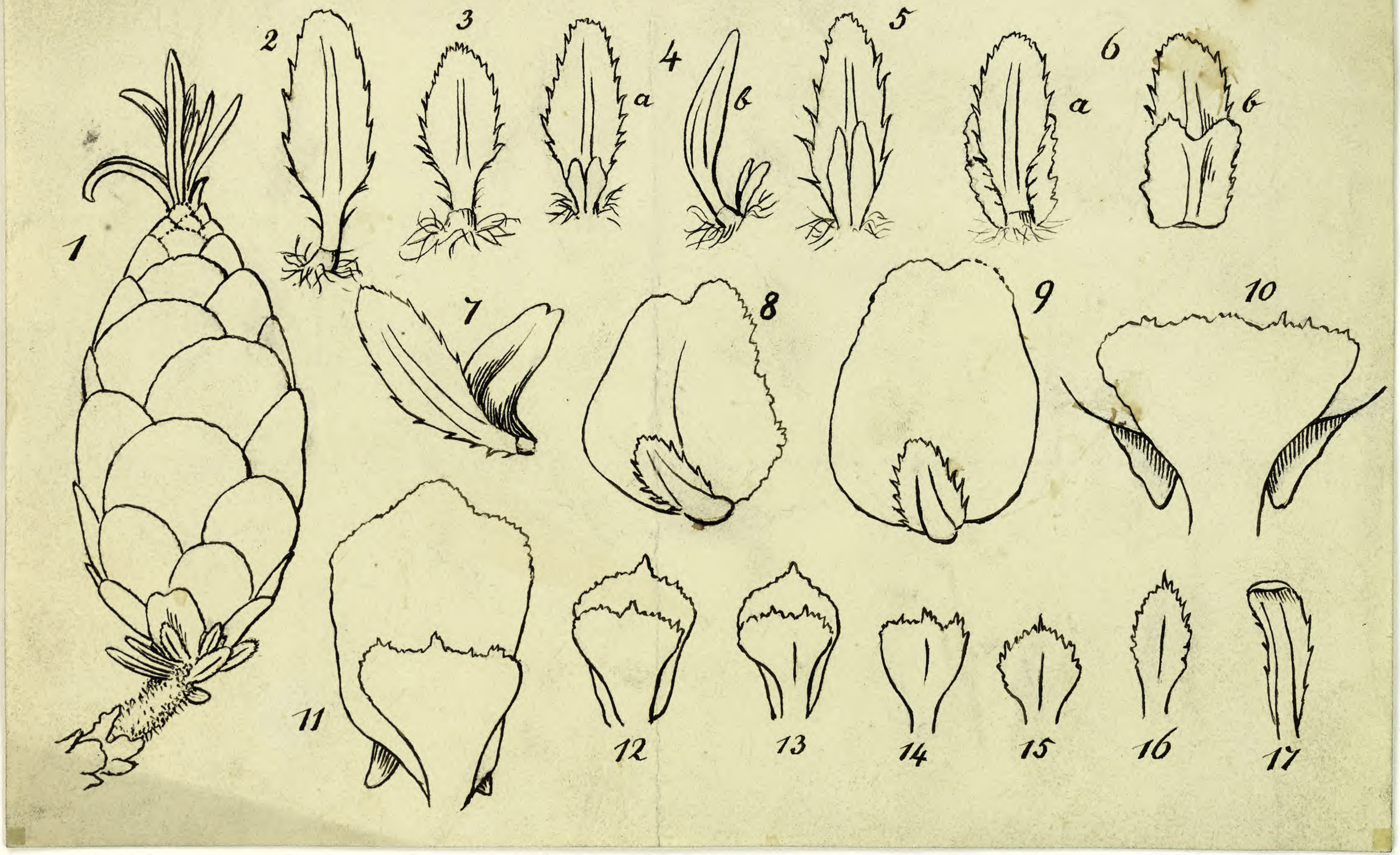

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cm 0 1 2 3 4 5 6 7 8 9 10
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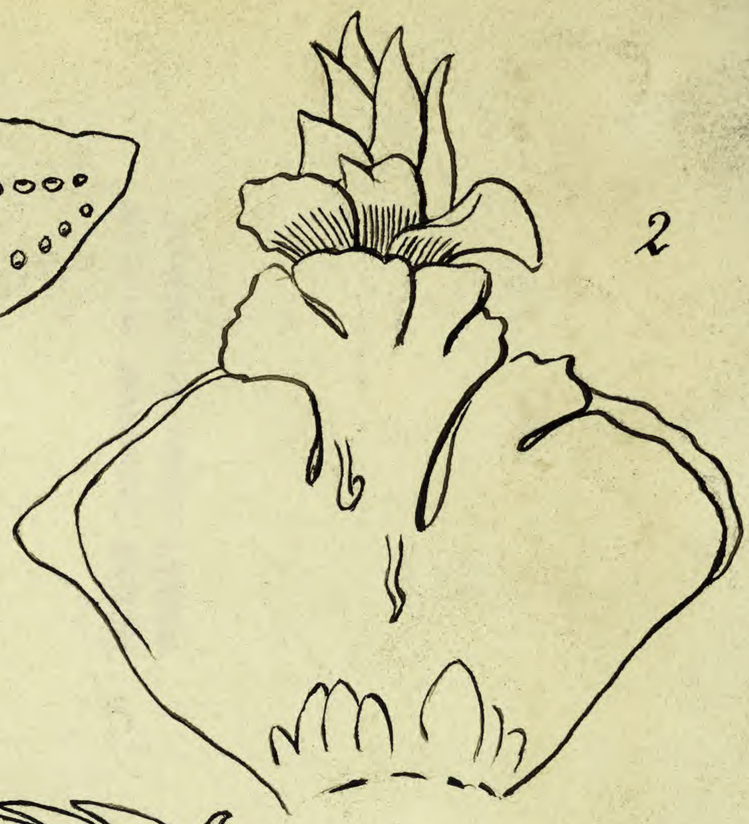
1

7

2



3

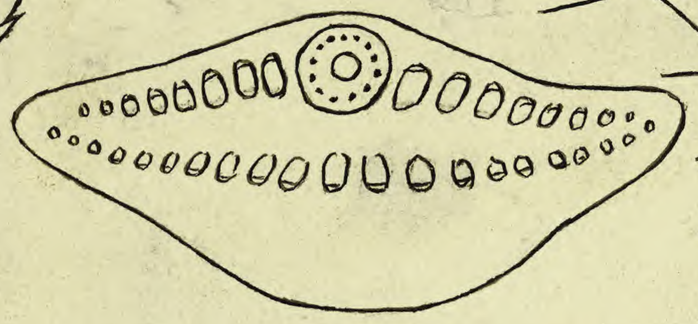
d

c

b

a

6



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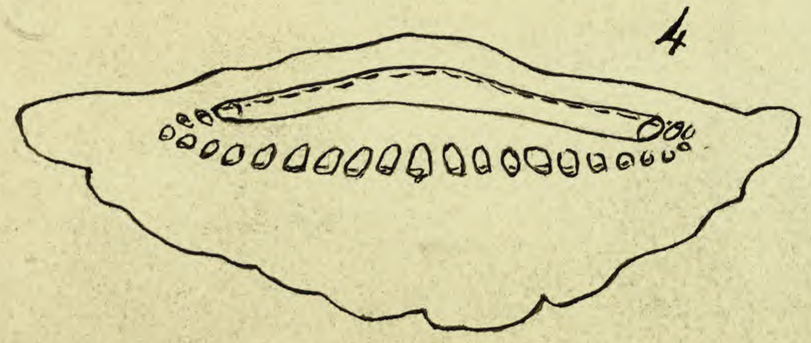

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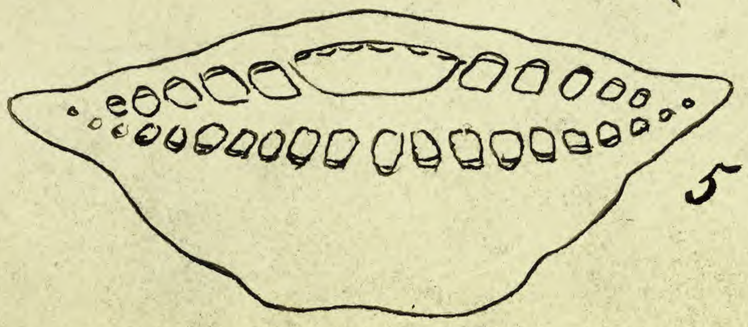

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Explanation of figures

1. A proliferous cone

2 One of the scales which is not as much altered as the lowest ones. seen from the inside; may twice, as all the following figures below are the marks of the abortive seeds, higher up in the middle are 2 peculiar abortive seeds; the line which divides the back from the connate carpellary leaves is visible on both sides, of the the 4 middle carpellary leaves are more separated from the lateral ones and among themselves, and above these the proliferous shoot ~~[illegible]~~ is visible, below with thick misshapen bracts, above with more regular normal green leaves

3 Vertical Section through a similar scale showing the distribution of the vessels; two bundles go into the bract and above this into the scale and a third bundle separates from the latter to furnish the new axis and its leaves.

4–7 are horizontal sections through this scale, fig 4 the lowest one a a, the bundles of vessels of the carpellary scales are almost all united into a single band; fig 5, section at bb. only the middle bundles of the carpellary scales are united, the lateral ones are free fig 6, section higher up at c c the middle bundles now are united into a circle, with a medullary cavity centre. In fig 7, section at d d, the new axis is ready to separate from the scale completely separated from the scale, the angular circumference shows the bases of the 5 lowest corky leaves of this axis.

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Camp Washington Cincinnati O. March 16. 83.

Dr. Geo. Engelmann.

St. Louis.

Dear Sir.

Will you kindly present a paper on a subject upon Forestry at the Ohio-State-Forestry-Convention to be held under the auspices of the Ohio-State Forestry-Association in the city of Cincinnati O. on the 26 + 27 of April next?

If you accept this invitation, as we sincerely hope you will, You would confer a favor by communicating to the undersigned the subject of your paper.

Hoping to receive a favorable reply I am Sir

Most respectfully Yours.

Adolph Lenné.

Sec'y Ohio State Forestry Asseciation.

5.7 5.4 8.5 7.3 8.1 9.2 9.6 4.1 5.4 7.4 8.- 88.5 8.4 5.5 = 7.4

5.5 6.9 9.2 8.9 7.2 5.6 8.8 9.0 3.6 4.8 7.0 7.4 123.9 = 10.70

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